

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/IL04/00976

A. CLASSIFICATION OF SUBJECT MATTER  
IPC: A01G 31/04( 2007.01),9/02( 2007.01)

USPC: 47/59R,62R  
According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
U.S. : 47/59R,62R

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
TEXT SEARCH ON EAST WITH KEYWORDS HYDROPONIC, WHEEL, ROTATE, MOTOR, GEAR.

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5584141 A (JOHNSON) 17 DECEMBER 1996 (17.12.1996), WHOLE DOCUMENT.	1-15
A	US 3998007 A (MARTIN) 21 DECEMBER 1976 (21.12.1976), WHOLE DOCUMENT.	1-15
A	US 5515648 A (SPARKES) 14 MAY 1996 (14.05.1996), WHOLE DOCUMENT.	1-15
A	US 3973353 A (DEDOLPH) 10 AUGUST 1976 (10.08.1976), WHOLE DOCUMENT.	1-15
A	JP 405146227 A (YAMAMOTO ET AL.) 15 JUNE 1993 (15.06.1993), WHOLE DOCUMENT.	1-15

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

* Special categories of cited documents:	
"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"E" earlier application or patent published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search  
02 December 2006 (02.12.2006)

Date of mailing of the international search report

Name and mailing address of the ISA/US  
Mail Stop PCT, Attn: ISA/US  
Commissioner for Patents  
P.O. Box 1450  
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# PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference e-0008-0001	<b>FOR FURTHER ACTION</b>	See item 4 below
International application No. PCT/IL2004/000976	International filing date ( <i>day/month/year</i> ) 26 October 2004 (26.10.2004)	Priority date ( <i>day/month/year</i> ) 26 October 2003 (26.10.2003)
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237		
Applicant ALINSKI, Zahar		

1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).
2. This REPORT consists of a total of 6 sheets, including this cover sheet.  
  
In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.

3. This report contains indications relating to the following items:
 

<input checked="" type="checkbox"/> Box No. I	Basis of the report
<input type="checkbox"/> Box No. II	Priority
<input type="checkbox"/> Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input type="checkbox"/> Box No. IV	Lack of unity of invention
<input checked="" type="checkbox"/> Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<input type="checkbox"/> Box No. VI	Certain documents cited
<input type="checkbox"/> Box No. VII	Certain defects in the international application
<input type="checkbox"/> Box No. VIII	Certain observations on the international application
4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Date of issuance of this report 13 March 2007 (13.03.2007)
Facsimile No. +41 22 338 82 70	Authorized officer  <b>Simin Baharlou</b>  e-mail: pt09.pct@wipo.int

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

To:  
ZER YORAM  
APPELFELD ZER LAW OFFICE  
29 LILINBLUM  
65133 TEL-AVIV,  
ISRAEL

# PCT

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Applicant's or agent's file reference E-0008-0001		Date of mailing (day/month/year) <b>22 JAN 2007</b> <b>FOR FURTHER ACTION</b> See paragraph 2 below	
International application No. PCT/IL04/00976	International filing date (day/month/year) 26 October 2004 (26.10.2004)	Priority date (day/month/year) 26 October 2003 (26.10.2003)	
International Patent Classification (IPC) or both national classification and IPC IPC: A01G 31/04( 2007.01),9/02( 2007.01) USPC: 47/59R,62R			
Applicant ALINSKI, ZAHAR			

1. This opinion contains indications relating to the following items:

- ☒ Box No. I      Basis of the opinion
- ☐ Box No. II      Priority
- ☐ Box No. III      Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV      Lack of unity of invention
- ☒ Box No. V      Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI      Certain documents cited
- ☐ Box No. VII      Certain defects in the international application
- ☐ Box No. VIII      Certain observations on the international application

## 2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/ US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (571) 273-3201	Date of completion of this opinion 02 December 2006 (02.12.2006)	Authorized officer Son T. Nguyen Telephone No. 571-272-3600
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WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/IL04/00976

**Box No. I Basis of this opinion**

1. With regard to the language, this opinion has been established on the basis of:

- ☒ the international application in the language in which it was filed  
☐ a translation of the international application into \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

- ☐ a sequence listing  
☐ table(s) related to the sequence listing

b. format of material

- ☐ on paper  
☐ in electronic form

c. time of filing/furnishing

- ☐ contained in the international application as filed.  
☐ filed together with the international application in electronic form.  
☐ furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

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**Box No. V Reasoned statement under Rule 43 bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Claims <u>4-10,15</u>	YES
	Claims <u>1-3,11-14</u>	NO
Inventive step (IS)	Claims <u>NONE</u>	YES
	Claims <u>1-15</u>	NO
Industrial applicability (IA)	Claims <u>1-15</u>	YES
	Claims <u>NONE</u>	NO

**2. Citations and explanations:**

Please See Continuation Sheet

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Supplemental Box  
In case the space in any of the preceding boxes is not sufficient.

**V. 2. Citations and Explanations:**

Claims 1-3,11-14 lack novelty under PCT Article 33(2) as being anticipated by Johnson (5584141).

Johnson teaches a rotating cultivation system comprising a main wheel assembly 40 having a rotating mechanism at the central axis controlled by a motor 60 and at least two frames 44,46 having supporting spokes 50 projecting from the central axis wherein each spoke holds a tray 134; secondary wheel assemblies 80 each having a central axis and at least two frames of spokes 84,88 extending from the secondary axis wherein each spoke holds a tray 134; wherein the central axes of the secondary wheel assemblies are located at the edges of the main wheel assembly supporting spokes and the rotation of the secondary wheel assemblies is independent of the main wheel assembly rotation; wherein the trays contain cultivation beds for growing mushrooms or agricultural products; wherein adjacent secondary wheel assemblies rotate in opposite directions in synchronization (col. 2, lines 57-67); and wherein the main and secondary assemblies are elevated by a stand consisting of two triangular frames 18.

Claims 4-10,15 lack an inventive step under PCT Article 33(3) as being obvious over Johnson.

For claim 4, Johnson is silent about wherein the rotation of all secondary wheel assemblies is controlled by a central rotating mechanism which includes a second motor and a gear assembly enabling the rotation of all secondary wheel assemblies simultaneously. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a second motor and a gear assembly in the system of Johnson, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art.

For claim 5, Johnson is silent about wherein the gear assembly is mounted on the same axis of the main wheel assembly utilizing ball bearings. It would have been obvious to one having ordinary skill in the art at the time the invention was made to mount the gear assembly on the main wheel assembly by using ball bearings in the system of Johnson, since it has been held that rearranging parts of an invention involves only routine skill in the art.

For claim 6, Johnson is silent about wherein the central rotating mechanism transfers the rotational movement through gears and shafts wherein a main gear rotates respective small gears and each small gear transfers the motion to a respective secondary wheel assembly through the shaft rotation. It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ a central rotating mechanism transfers the rotational movement through gears and shafts wherein a main gear rotates respective small gears and each small gear transfers the motion to a respective secondary wheel assembly through the shaft rotation in the

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**Supplemental Box**

In case the space in any of the preceding boxes is not sufficient.

system of Johnson, since it is notoriously well known in the art of motor, gear and rotation that this type of configuration to rotate a wheel-like assembly is employed as desired by the intended use of the user.

For claim 7, Johnson is silent about wherein the central rotating mechanism transfers the rotational movement through gears and chains wherein a main gear rotates respective small gears and each small gear transfers the motion to a respective secondary wheel assembly through the chain movement. It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ a central rotating mechanism transfers the rotational movement through gears and chains wherein a main gear rotates respective small gears and each small gear transfers the motion to a respective secondary wheel assembly through the chain movement in the system of Johnson, since it is notoriously well known in the art of motor, gear and rotation that this type of configuration to rotate a wheel-like assembly is employed as desired by the intended use of the user.

For claim 8, Johnson is silent about wherein the rotation of each secondary wheel assembly is controlled by a single rotating mechanism which includes a second motor and a gear. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a second motor and a gear assembly in the system of Johnson, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art.

For claim 9, Johnson is silent about wherein the main wheel assembly is comprised of an external wheel and an inner wheel, each driven by a separate motor, wherein the external wheel rotates on bearing which are positioned on a stand and the two sides of the inner wheel rotates in opposite directions, each side causing the rotation of three un-successive secondary wheels on their axes. It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ a main wheel assembly is comprised of an external wheel and an inner wheel, each driven by a separate motor, wherein the external wheel rotates on bearing which are positioned on a stand and the two sides of the inner wheel rotates in opposite directions, each side causing the rotation of three un-successive secondary wheels on their axes in the system of Johnson, since it is notoriously well known in the art of motor, gear and rotation that this type of configuration to rotate a wheel-like assembly is employed as desired by the intended use of the user.

For claim 10, Johnson is silent about wherein the secondary wheels are shaped as big cogwheels positioned in proximity to one another. It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ a secondary wheels are shaped as big cogwheels positioned in proximity to one another in the system of Johnson, since it is notoriously well known in the art of motor, gear and rotation that this type of configuration to rotate a wheel-like assembly is employed as desired by the intended use of the user.

For claim 15, Johnson is silent about the motors are located on the triangular stand. It would have been obvious to one having ordinary skill in the art at the time the invention was made to mount the motors on the triangular stand in the system of Johnson, since it has been held that rearranging parts of an invention involves only routine skill in the art.